

IFW

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as First Class Mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: January 22, 2007

Signature: 

(Beverly S. Carter)

Docket No.: 199372005500  
(PATENT)



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Kotaro TSURUSAKI et al.

Application No.: 10/540,762

Confirmation No.: Unknown

Filed: June 24, 2005

Art Unit: Unknown

For: LIQUID TREATMENT APPARATUS AND  
LIQUID TREATMENT METHOD

Examiner: Unknown

**TRANSMITTAL**

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:


With reference to the subject application, enclosed is a copy of the English translation of the International Preliminary Report on Patentability as issued in International Patent Application No. PCT/JP2005/006120. Please make this document of record in the present application.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Director to charge the cost of such petitions and/or other fees due in connection

with the filing of this document to Deposit Account No. 03-1952 referencing Docket No. 199372005500. However, the Director is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: January 22, 2007

Respectfully submitted,

By   
David L. Fehrman

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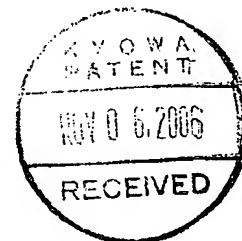
From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

YOSHITAKE, Kenji  
Kyowa Patent & Law Office  
Room 323, Fuji Bldg.  
2-3, Marunouchi 3-chome  
Chiyoda-ku, Tokyo 100-0005  
JAPON



Date of mailing ( <i>day/month/year</i> ) 26 October 2006 (26.10.2006)	
Applicant's or agent's file reference 152717-290	<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/JP2005/006120	International filing date ( <i>day/month/year</i> ) 30 March 2005 (30.03.2005)
Applicant TOKYO ELECTRON LIMITED et al	

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

**2. Transmittal of the copy of the translation to the designated or elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Yoshiko Kuwahara

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

**TRANSLATION**

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference

**152717-290**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/JP2005/006120**

International filing date (day/month/year)

**30.03.2005**

Priority date (day/month/year)

**15.04.2004**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**TOKYO ELECTRON LIMITED**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 152717-290	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/JP2005/006120	International filing date ( <i>day/month/year</i> ) 30 March 2005 (30.03.2005)	Priority date ( <i>day/month/year</i> ) 15 April 2004 (15.04.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant TOKYO ELECTRON LIMITED			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report   |
| <input type="checkbox"/> Box No. II           | Priority  |
| <input type="checkbox"/> Box No. III          | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV           | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI           | Certain documents cited   |
| <input type="checkbox"/> Box No. VII          | Certain defects in the international application  |
| <input type="checkbox"/> Box No. VIII         | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Date of issuance of this report 19 October 2006 (19.10.2006)
	Authorized officer  Yoshiko Kuwahara  e-mail: pt07@wipo.int

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/006120

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/006120

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>9-11, 19</u>	YES
	Claims	<u>1-8, 12-18</u>	NO
Inventive step (IS)	Claims	<u></u>	YES
	Claims	<u>1-19</u>	NO
Industrial applicability (IA)	Claims	<u>1-19</u>	YES
	Claims	<u></u>	NO

2. Citations and explanations:

Document 1: JP, 10-335295, A (Dainippon Screen Mfg. Co., Ltd.), 18 December, 1998 (18.12.98), full text, all drawings (Family: none)

The subject matters of claims 1-8 and 12-18 do not appear to be novel in view of document 1 cited in the ISR. Document 1 discloses a liquid treating apparatus and method, in which a treating liquid is supplied from two pairs of treating liquid discharge nozzles installed at the top and the bottom in a treating tank, with the respective amounts of the treating liquid discharged from the nozzles changed over time.

The subject matters of claims 9-11 do not appear to involve an inventive step in view of document 1 cited in the ISR. Document 1 does not describe a flow control device, but considering the description "a chemical liquid with a predetermined concentration is produced" (page 4, column 5, line 1), it is considered that document 1 suggests a constitution for keeping the concentration substantially constant such as a flow control device. So, a person skilled in the art could have easily conceived of employing the said constitution.

The subject matter of claim 19 does not appear to involve an inventive step in view of document 1 cited in the ISR. Recording a software capable of being executed by a control computer into a recording medium is a commonly used technique. So, a person skilled in the art could have easily conceived of recording the liquid treating method described in document 1 into a recording medium as a software capable of being executed by a control computer.